



Prairie Update

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Welcome to the Island!

by Jeremy Brown, PAg - Agrologist, Saskatchewan Watershed Authority



Manitou Island, seen here in an aerial photograph, is a truly unique feature of the Saskatchewan landscape.

This area is recognized for its cultural significance, sensitive sandy soils, and endangered species.

Manitou Lake is the largest of many important lakes in the Sand Hills. The shorelines of this saline lake are designated as a Prime Conservation Area in the Plan, due to their sensitive nature. The Lake also boasts a sizeable island of approximately 3,100 acres which was used to provide winter forage for sheep and horses in the early 1900s.

In the 1950's, the Graham family couldn't resist the opportunity to graze cattle on the island, and the Manitou Lake Island Grazing Co-op was born. In those times, the animals were shipped to and from the island on a home-made barge. As you might expect, there are more than a few amazing stories of loading cattle, scary storms, and the barge floating helplessly across the lake with broken steering!

There were many other adventures during that period, such as moving equipment and feed across the ice, accessing the island by motor boats and airplanes in the summer, day trips to put up hay, and overnight stays in the shack when bad weather or break-downs occurred. Being in the middle of a saline lake, finding drinking water for the livestock was always an issue. Hand dug wells, a small dugout, and developed springs near the shoreline met this need.

Later the co-op disbanded, and the Sterling Graham family took over the lease. Barging the cattle to and from the island was too labour-intensive for one family, so a new method of accessing the island was necessary. During these years, heifers were walked across the ice in March, and then home again in December once the ice was

again safe. This use created a new question - how to put out the bulls at breeding time? The quandary was solved by swimming the bulls over from the south shore, using a motor boat to haze them in the right direction.

These days, accessing the island is much easier, as the water level in the lake has been steadily declining for many years. Since 2002, a narrow neck has joined the island's south side with the main land. Now cattle can be hauled in, and checking and maintenance can be done by simply driving a vehicle across.

Today, the island is leased by Bruce and Carol Graham. They have typically grazed up to 90 of their 400 cows there each summer. Recently, they have recognized the need to reduce stocking rates due to a succession of dry years.

Unfortunately, the busyness of a working ranch often doesn't allow time to stop and appreciate the beauty of our surroundings. In 2009, the Grahams held a family reunion which included a tour of the island to soak up the unique wonders of the Sand Hills. Sharp-tailed grouse dancing grounds, cacti on the hillsides, and dozens of meadowlarks were some of the highlights of the day. Mule deer and Piping Plovers are also inhabitants of the island.

In 2008, the Grahams partnered with the Saskatchewan Watershed Authority to enhance their grazing management. With funding from the Government of Canada's Habitat Stewardship Program, they were able to construct approximately six miles of cross fence to better manage cattle grazing by separating different forages. Around 500 acres in the middle of the island had been broken to grow feed in the 1970's.

These fields were then seeded to tame grass in the 1980s, but without adequate fences and few water sources, cattle were over utilizing the west side of the island while barely using some of the east side.

This new fencing allows the Grahams to utilize the tame grass early in the summer, which defers grazing on the native prairie and shoreline until July. This management system benefits forage production and helps conserve grassland and shoreline bird habitat that is used by the endangered Piping Plover. They are also interested in developing more watering spots to further improve grazing distribution.

Through this project, the Graham family is making better use of a truly unique area of the prairies that has a fascinating history and bright future.

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12 Steps to Successful Forage Establishment

by Bob Springer, PAg – Saskatchewan Watershed Authority & Dale Pocock – Saskatchewan Crop Improvement Association Inc.



There are a number of factors you will need to consider to successfully establish your forage.

1. **FIELD HISTORY** – Have any soil-residual herbicides been applied to the land in the past 4 years?

- ✓ Soil-residual herbicides used in previous years may damage forage seedlings and result in poor establishment.
- ✓ Consult the *Guide to Crop Protection*, available on the Saskatchewan Ministry of Agriculture's website (www.agriculture.gov.sk.ca), or your Agrologist for information on re-cropping intervals for herbicides that were previously used. Some may require 1-2 years depending on soil type and weather conditions.
- ✓ If unsure about residue, seed a test strip and assess establishment prior to seeding the entire field.

2. **PROPER FIELD CONDITION** – Is the field firm with well-spread crop residue?

- ✓ Poorly spread straw and chaff will interfere with soil/seed contact, resulting in poor germination and/or poor establishment.
- ✓ Good results can be achieved when seeding into un-worked, standing stubble, providing proper seed depth can be achieved and good soil to seed contact.

- ✓ With tilled seed beds, pre-work with a rod-weeder (equipped with tine harrows and trailing coil packers) to create a good seed bed. A rod-weeder sifts fine soil particles to the area where forage seed is to be placed, and brings lumps and trash to the surface.

3. **WEED CONTROL** – Will perennial, annual or winter annual weeds need to be controlled?

- ✓ Control of perennial weeds is very important for successful forage establishment.
- ✓ One or two pre-seeding burnoffs with glyphosate is key to good establishment.
- ✓ Serious weed problems (including soil seed banks) may require extended control measures such as annual forage cropping or short-term perennials like Dahurian wild rye prior to seeding a long-term perennial.
- ✓ Delay seeding into June or late fall if necessary to allow control of late germinating weeds. Short-term summer-fallow or chem-fallow can extend to late July for legumes, up to early September for grasses.

4. **SPECIES/VARIETY SELECTION** – Which are adapted to and most productive in my area?

- ✓ Select forage species and varieties that are known to persist and produce in your soil zone and area.
- ✓ Select forage species that are suited to the intended season of use.
- ✓ Consult the *Saskatchewan Forage Crop Production Guide*, available on the Saskatchewan Ministry of Agriculture's website (www.agriculture.gov.sk.ca), your local Agrologist, and successful producers in your area.

5. **SITE SPECIFIC ADAPTABILITY** – Which species are best-suited to my soil type and texture?

- ✓ Sandy soils, flood-prone soils and saline soils are examples of sites where only certain forage species are adapted.
- ✓ Consult your local Agrologist and successful producers in your area.

6. **SEED QUALITY** – Am I buying seed that is of the highest germination and purity?

- ✓ You must look at the Seed Testing Certificates for seed lots you are considering purchasing to ensure high germination and purity of seed.

- ✓ Reject seed lots that contain weed seeds not wanted on your operation. *Remember, number 1 grades can still contain up to 50 weed seeds per 25 grams.* Shop around for weed-free seed, it is obtainable.

- ✓ Look for seed that is well-conditioned for maximum quality and flow. The top portion of an opened bag will indicate proper "conditioning" of grasses (removal of seed hairs, de-awned and re-threshing of any possible "doubles") and removal of inert material longer than seeds. Look for seed with "shiny" seed coat.

- ✓ Legumes need to be hulled – i.e. scarified to reduce "hard seed" content - for maximum germination.

7. **SEEDING DATE** – What is the best seeding date for my situation?

- ✓ April 15 to June 15 is best for most sites; saline sites are best seeded in late fall.
- ✓ Seed legumes no later than July 31; grasses up to early September under favorable conditions.
- ✓ If high grasshopper numbers are expected, seed in early spring or late fall.

8. **SEEDING RATE** – Do I have the 15-20 seeds per foot of row needed for a good stand?

- ✓ Use a seeding implement that can meter the seed accurately and prevents bridging. If you select well-conditioned seed, bridging should not be a problem.
- ✓ Mixing seed 1:1 by volume with a carrier such as 11-51 fertilizer will improve flow in most implements.
- ✓ With experience, use of good seeding equipment and superior quality seed, excellent "drought proof" forage stands can be established using seeding rates of approximately ½ the rate indicated above (8-10 seeds per foot).

9. **SEEDING DEPTH** – Shallow seeding is the most important point to remember!!

- ✓ Use a seeding implement that will not place the seed too deep. The maximum is ¼ to 1 inch.
- ✓ Disc-drills with depth bands, air seeders, or a valmar with harrows and packers may be suitable in many soil types, but won't make up for poor trash management.
- ✓ Proper seed beds, either tilled or no-till, can make disc depth controls unnecessary.
- ✓ Remember, seed can also be placed too shallow for adverse conditions.

10. **PACKING** – Is my seeding implement doing an adequate job of packing?

- ✓ On-row packers are best – adequate pressure is required to close the seed furrow.
- ✓ On-row packers need to reach down into the seed trench for proper seed/soil contact, closing large air pockets but leaving soil condition around the seed still "finely aerated".
- ✓ Land rollers can be very effective; use only enough weight to close the seed furrow firmly, resulting in good soil/seed contact. Avoid use where erosion may be a problem – check depth of soil over the seed following rolling to ensure proper seed depth.

11. **COMPETITION** – Am I minimizing competition from in-crop weeds and insects?

- ✓ Spray or bale off weeds as early as possible to reduce competition.
- ✓ Spray for grasshoppers as soon as they emerge if numbers are sufficient.
- ✓ Don't seed a "cover crop" with the new forage crop. Cover crops have been shown to reduce establishment and long-term forage yield under some conditions.
- ✓ If a cover crop is deemed necessary for erosion control, then only seed between the forage rows and remove it early as greenfeed. A cover crop soon becomes a smother crop if not removed early.
- ✓ Remember, many of our new forage species/varieties can produce substantial forage in the establishment year if seeded alone and conditions are favorable. Some can even be grazed in the first year under the right conditions and management.

12. **BE PATIENT** – How long am I willing to wait for establishment?

- ✓ Forage establishment often can take more than one year, particularly when a cover crop is used.
- ✓ When the cover crop is not seeded in-row with the forage, quicker assessment is possible.
- ✓ Don't make a decision to re-seed a new forage stand until at least mid-June of the second season.
- ✓ If establishment is thin or patchy, over-seeding may be possible (providing proper seed depth and seed/soil contact) to achieve desired plant density (minimum two plants/sq. ft.).

Hello Voluntary Stewards!

As spring approaches, we know you will be busy making plans for the upcoming field season. We hope the stories in this edition of the *Prairie Update* will provide you with both ideas and information that you can use when it comes to your planning.

We'd also like to take this opportunity to provide you with the head's-up that we hope to contact a number of our Voluntary Stewards over the summer months. For some of you, it has been quite a few years since we've been in touch, and we'd like to follow up on some of the management practices that we've provided assistance with in the past.

As always, we look forward to hearing your questions, comments, or suggestions for articles you would like to see in this newsletter.

Jennifer Lohmeyer

Visit Us Online!

You can find more information on the Saskatchewan Watershed Authority's Prairie Stewardship Program in back issues of this newsletter.

These issues, as well as interactive maps featuring other stewardship project demonstration sites, can be viewed on our website, www.swa.ca.

Coming Events

For more information on stewardship events, please contact the Saskatchewan Watershed Authority office nearest you:

North Battleford	Jeremy Brown	446-7460
Regina	Etienne Soulodre	787-0661
Swift Current	Krista Connick Bob Springer	778-8280 778-8301
Weyburn	Stacey Gulka	848-2354
Yorkton	Jason Puckett	786-5845

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Saskatchewan Watershed Authority
#420 – 2365 Albert Street
Regina, SK S4P 4K1

Phone: (306) 787-0726

Fax: (306) 787-0780

Website: www.swa.ca



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